

Managing Applications in Pervasive Computing Environments

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**EMERGING
COMPANIES**
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Presentation Overview

- Background & Assumptions
- Computing Device Categories
- Traditional Connection Methods
- Traditional Requirements
- Emerging Connection Methods
 - Working Example
- Emerging Requirements
- Mobile-specific Requirements
- Mobile Workplace Attributes
- Summary – Q&A

XcelleNet's Mobile Management Mission:

To provide enterprise-wide **Mobile Device Management** solutions for laptops, PDAs, smart phones, and interactive pagers.



Our solutions enable businesses to implement and maintain Internet- and wireless-enabled mobile applications, content and configuration.



General Categories of Computing Devices / Environments

Servers	Workstations	Intelligent Devices	Configurable Devices
Mainframes	Desktops	PDA's	Appliances -OSGI -JINI
Mini-frames	Notebooks	Smart Phones	
Unix-based	Sub-Notebooks	Embedded CE	Phones
NT/2K-based	PCs on a Card	J2ME/KVM	Pagers
	Embedded PCs	Gateways -OSGI -Vehicle	Single-Purpose Devices

Traditional Connection Methods

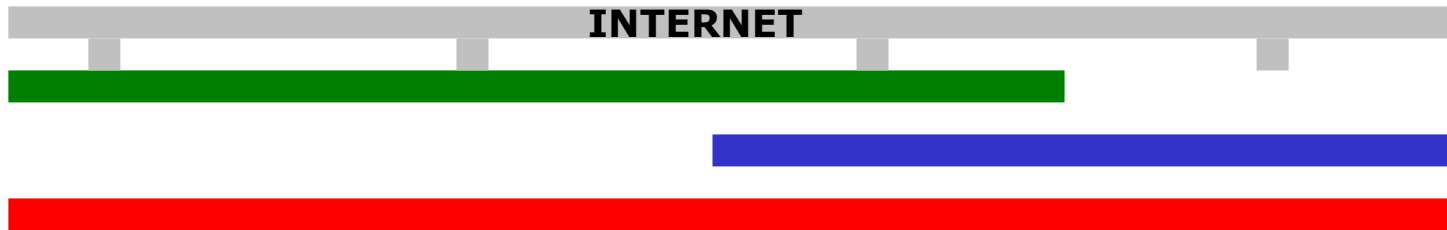


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Traditional Requirements

- Security: Authentication / Encryption
- File Push / Pull
- Software Deployment / Maintenance
- Device Inventory / Asset Collection
- Device Image Maintenance
- Database Synchronization

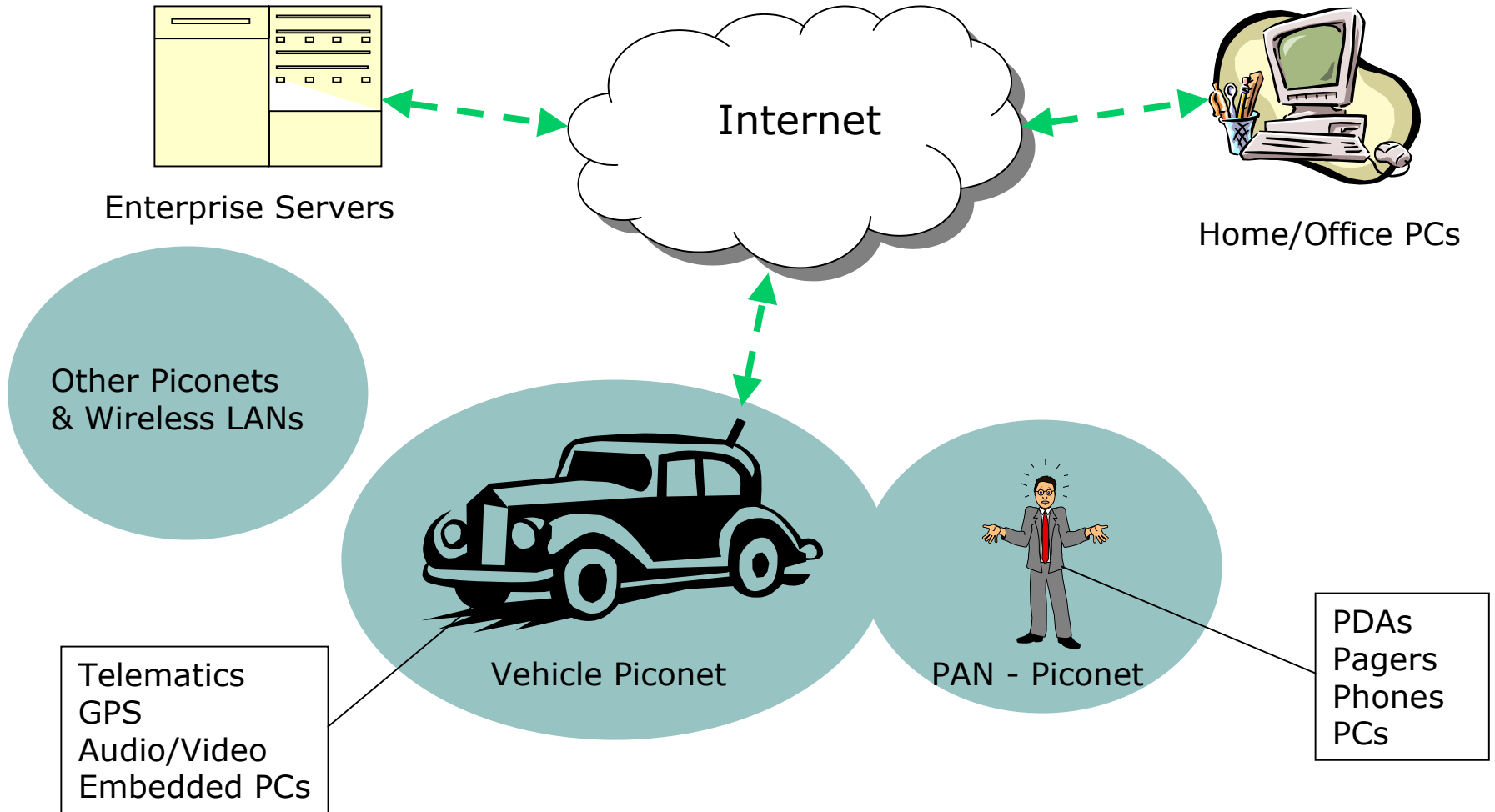
Emerging Connection Methods



PEER

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Vehicle Scenario



Emerging Requirements

Traditional Requirements +

- Device Provisioning / Configuration
- User vs. Organizational Data
- Life-cycle & QoS Data Collection
- Service Discovery & Activation
- Rules-based Exposure Levels
- Presence / Location Contextual Behavior
- *Mobile-specific Requirements*

Mobile-Specific Requirements

- In / Out of Coverage Tolerance (offline)
- Unattended Functionality
- Minimal / Non-distracting User Interfaces
- Presence / Location Contextual Behaviors
- Communications Interface Integration
- Support *Mobile Workplace Attributes*

Mobile Workplace Attributes

- Usability in non-traditional environments
 - Vehicles
 - Hallways
 - Waiting Queues
 - Data Collection / Service Sites
- Interaction with Peers, PANs, LANs & WANs
 - Bluetooth Piconets
 - 802.11b/a Access Points
 - CDPD, GPRS, CDMA 2000, W-CDMA

Summary: What Tomorrow's Applications Will Require

- Interaction with Multiple Entities / Interfaces
- Environmental Awareness / Discovery
- Mobile-specific Usability
- Communications Integration
- Contextual Security
- Centralized & Local Management

Questions



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